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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,068	11/01/2001	Kazuya Kitamura	56672 (70904)	5240

21874 7590 05/28/2004

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EXAMINER

HUBER, PAUL W

ART UNIT	PAPER NUMBER
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2653

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DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,068

Applicant(s)

KITAMURA ET AL.

Examiner

Paul Huber

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 8, 10, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 2-6, 9, 11-16 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 7, 8, 10, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saimi et al. (USP-6,430,137).

Saimi et al discloses an optical pickup for reading/writing data. See figures 1-7. The optical pickup comprises: a convergent optical system, composed of a singlet objective lens 105, for converging output light emitted by a light source 101 on an optical storage medium 106; and an aberration-correcting optical system (104 & 107-109) for correcting coma aberration due to at least an inclination of the objective lens or the optical storage medium to an optical axis of the optical pickup. See col. 9, lines 58-67.

Saimi et al discloses the invention as claimed, but fails to specifically teach that the singlet objective lens 105 has a NA not less than 0.75. Saimi et al, however, teaches in the "Description of the Prior Art", a problem with respect to the prior art with which an object of the invention is to overcome: "Among conventional optical disk devices, there is no example of a device using an object lens with a NA that is high enough so that errors in the

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thickness of the substrate may have become a problem, and irregularities in the substrate thickness have not been a particular problem" (col. 3, lines 1-6). Saimi et al more particularly describes the problem in the conventional art as being "when the NA is more than 0.6, the thickness irregularities of the substrate and the aberrations intrinsic to the lens itself become a problem" (col. 3, lines 27-29). Accordingly, Saimi et al teaches that in order to overcome the problems associated with high density optical devices using an objective lens having a high NA, i.e., over 0.6, "an aberration detection device [is provided in, for example figure 1] wherein aberrations are detected in real-time or a time equivalent to real-time, and that can be controlled with a high-speed closed loop" (col. 4, lines 49-53).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Saimi et al such that the singlet objective lens 105 of figure 1 has a high NA, such as for example at least 0.75, in accordance with the teachings in Saimi et al recognizing the well known problem of high NA devices and the object of the invention to overcome such problem. A practitioner in the art would have been motivated to do this for the purpose of increasing the storage density of an optical storage medium used in the device.

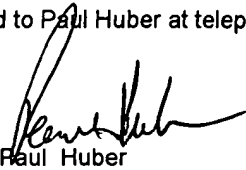
Regarding claims 7, 8, & 10, the aberration-correcting optical system is composed of elements arranged in two separate groups, i.e., one optical group consisting of element 104 and another optical group consisting of elements 107 & 109. Each group includes at least one of the elements for either converging or diffusing output light. The two groups are considered to have the refraction power as claimed.

Regarding claim 18, in another embodiment of the invention, the objective lens 105 is disposed in combination with element 115 and is considered a doublet as claimed. See figure 16.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited on the PTO-892 each disclose an optical system including an optical pickup having a specific objective lens.

Claims 2-6, 9, 11-16, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Paul Huber at telephone number 703-308-1549.



Paul Huber
Primary Examiner
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